End-to-end information infrastructure for business intelligence, including information integration, master data management, data warehousing, industry models and business intelligence tools

IBM

Information On Demand Framework for Business Intelligence
Unlocking the business value of information for competitive advantage
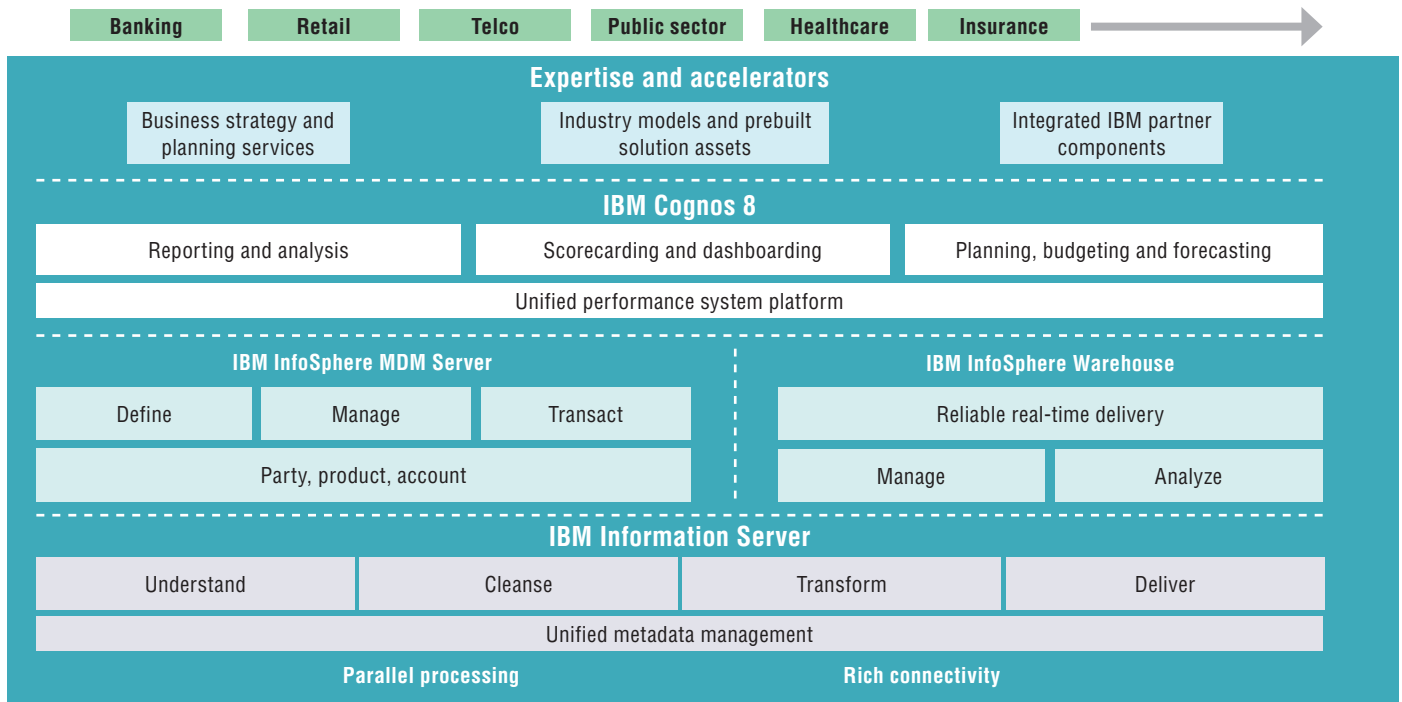
IOD Framework for BI

Banking	Retail	Telco	Public sector	Healthcare	Insurance

Expertise and accelerators

Business strategy and planning services	Industry models and prebuilt solution assets	Integrated IBM partner components

IBM Cognos 8

Reporting and analysis	Scorecarding and dashboarding	Planning, budgeting and forecasting

Unified performance system platform

IBM InfoSphere MDM Server

Define	Manage	Transact

Party, product, account

IBM InfoSphere Warehouse

Reliable real-time delivery

Manage	Analyze

IBM Information Server

Understand	Cleanse	Transform	Deliver

Unified metadata management

Parallel processing   **Rich connectivity**

Figure 1. IBM IOD Framework for BI.

IBM provides end-to-end information infrastructure capabilities for business intelligence (BI) through its industry-leading solutions:

- *Data warehousing with IBM InfoSphere™ Warehouse (IBM DB2®) software*
- *Business intelligence offerings with IBM Cognos 8*
- *Information integration through IBM Information Server*
- *Master data management (MDM) solutions including IBM InfoSphere Master Data Management Server and IBM WebSphere® Product Center*
- *Industry-specific data models (banking, financial markets, health care, insurance, retail, telecommunications, government)*

IBM InfoSphere Warehouse
- *Simplifies enterprise data-warehouse development, deployment and maintenance with a comprehensive, integrated solution*
- *Streamlines business intelligence processes and enhances flexibility with powerful, analytic solution components*
- *Boosts data warehouse performance and improves productivity with powerful DB2 9 optimization features*

Getting to a single version of the truth

Access to timely, accurate information is critical as enterprises look to drive rapid growth through innovation. Limited by typically inflexible data warehouse and business intelligence solutions, IT teams are challenged to quickly and agilely respond to business users' information needs. Data marts and data warehouses have proliferated across enterprises. Existing solutions, however, often are not integrated and contain conflicting data. Moreover, most business intelligence solutions built on the data warehouse are constructed and maintained using multiple tools and components from various vendors. This can create integration and enterprise standardization challenges. All too often, the combination of these factors leads to frustrated users, high development and maintenance costs, and poorly performing solutions that do not scale. IT teams must be able to support business requirements for a single version of the truth, while containing costs, accommodating ever-increasing data volumes, and dealing with the constantly changing needs of different business constituents.

IBM InfoSphere Warehouse software is a comprehensive platform for integrated, dynamic data warehousing that provides extended capabilities, from design to analytics and visualization. InfoSphere Warehouse provides the tooling and infrastructure to help data warehouse architects and administrators efficiently design, deploy and maintain an enterprise data warehouse. InfoSphere Warehouse is open and standards-based, and includes database, management and delivery tools, as well as integrated analytics to help you create a powerful yet flexible and cost-effective data warehouse solution. The InfoSphere Warehouse solution helps simplify the creation and deployment of a new data ware-house and leverages the power of the IBM DB2 9 platform.

A complete, fully integrated enterprise data-warehouse solution

InfoSphere Warehouse is the best core platform for dynamic warehousing solutions, because it provides a powerful range of capabilities that go beyond traditional warehouses. It has also been integrated with other critical components needed to deliver dynamic business insight. The solution includes a range of capabilities and proven technologies from IBM that include:

- *Powerful DB2 database foundation*
- *Modeling and design tools*
- *Embedded data movement and transformation*
- *Data mining and visualization*
- *Enhanced online analytical processing (OLAP) design and optimization*
- *Embedded analytics*
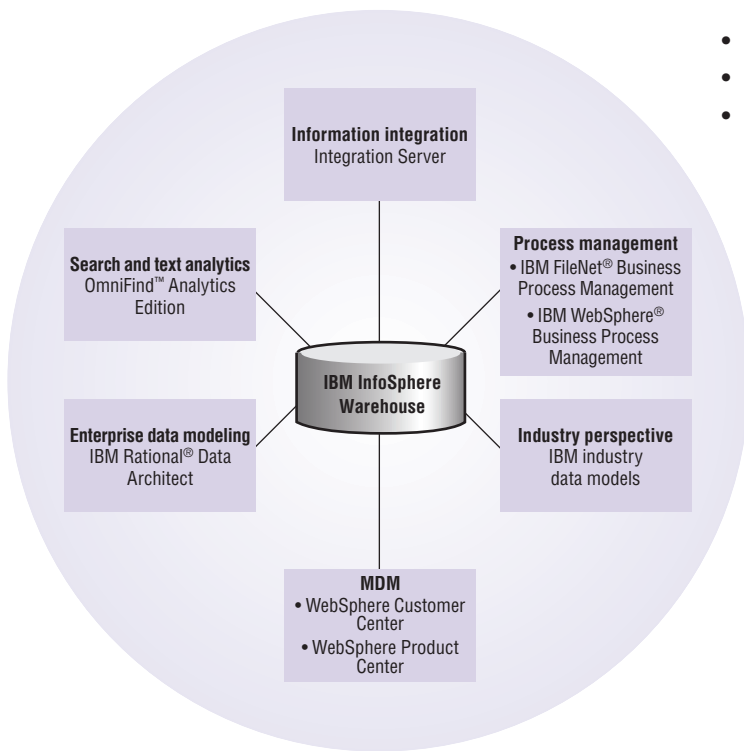- *Advanced compression*
- *Workload control*

Figure 2. Dynamic Warehousing and associated products from IBM.

Why IBM?

InfoSphere Warehouse enables dynamic data-warehousing solutions that can scale to hundreds of terabytes. Built on proven open-standards-based IBM tools, the InfoSphere Warehouse solution is designed to integrate with your existing investments. And high-availability features support 24x7 availability and quick recovery from hardware or software failures. Moreover, IBM offers worldwide support for InfoSphere Warehouse software implementations, so all of the necessary tools and resources are readily available to help make your enterprise data warehouse a reality.

IBM Cognos 8 Business Intelligence

Cognos 8 Business Intelligence (BI) delivers the complete range of BI capabilities on a single, service oriented architecture (SOA). You can author, share and use reports that draw on data across all enterprise sources for better business decisions.

Business intelligence capabilities:
- *Reporting*
- *Analysis*
- *Scorecarding*
- *Dashboards*
- *Planning, budgeting and forecasting*

IBM Cognos 8 BI - reporting

Reporting gives you access to a complete list of self-service report types, is adaptable to any data source, and operates from a single metadata layer for a variety of benefits such as multilingual reporting.

With the reporting capability, you can personalize the style and quality of BI delivered to your key stakeholders; and you expand the community of BI users through:

- *More targeted information*
- *More user communities*
- *Complete reporting coverage*
- *Advanced authoring capabilities*

IBM Cognos 8 BI - analysis

Analysis enables the guided exploration of information that pertains to all dimensions of your business, regardless of where the data is stored. Analyze and report against OLAP and dimensionally aware relational sources.

For those who want to explore and perform multidimensional analysis on Cognos 8 BI data in their spreadsheet, there is Cognos 8 BI analysis for Microsoft® Excel.
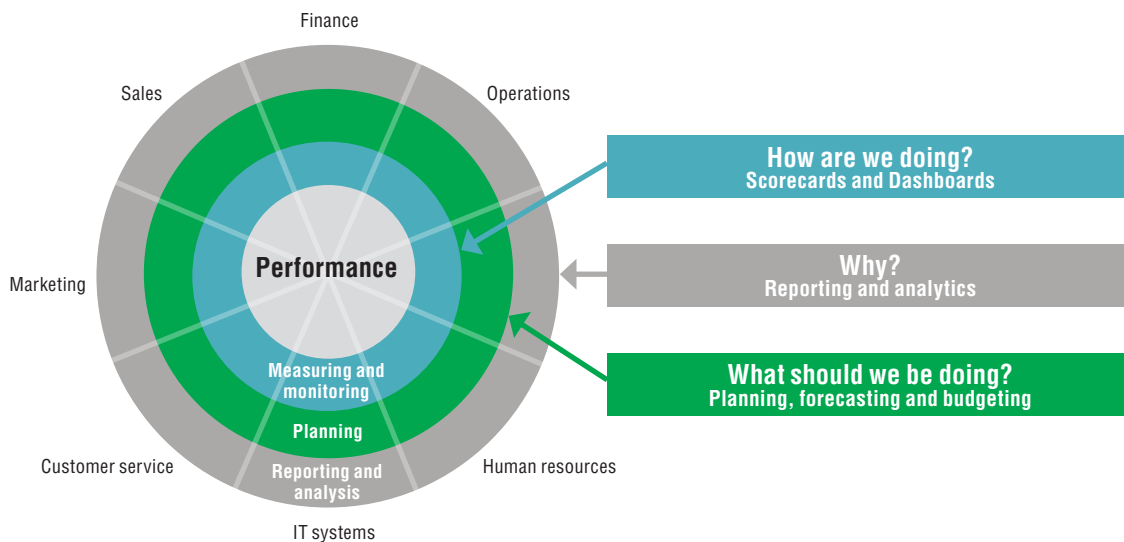

Figure 3. IBM Cognos 8 BI solutions address critical customer questions.

With the analysis capability, you can personalize the style and quality of BI delivered to your key stakeholders; and you expand the community of BI users through:

- *Robust analysis tools*
- *Multidimensional modeling capabilities*
- *Ease of use*
- *Ease of deployment*

IBM Cognos 8 BI - dashboards

Business dashboards communicate complex information quickly. They translate information from your various corporate systems and data into visually rich presentations using gauges, maps, charts and other graphical elements to show multiple results together.

Cognos offers the full range of dashboards — operational, tactical, strategic — to help you monitor, measure and manage corporate performance.

You can deploy Cognos dashboards as a stand-alone application or as a core element of an enterprise business intelligence or performance management platform.

IBM Cognos 8 BI - scorecarding

Scorecarding helps you align your teams and tactics with strategy, communicate goals consistently and monitor performance against targets. It offers the following benefits:

- *Provides more user communities*
- *Ensures ownership and accountability for performance*
- *Aligns decisions and tactics with strategy*
- *Implements your strategy and performs against it*
- *Provides simple deployment and administration*

IBM Cognos 8 BI - planning, budgeting and forecasting

Planning software helps you answer a fundamental performance management question, "What should we be doing?"

Translate your strategies and objectives into plans, budgets and forecasts. Build dynamic, interconnected models for better visibility and control over your performance. Define your goals: Develop your clear-cut strategy and allocate the resources to achieve it. Using IBM Cognos 8 BI can help you to:

- *Model "what-if"scenarios and go from "what-is" to evaluate new scenarios.*
- *Connect finance with other departments: Coordinate operational and financial plans for better reliability. Link your financial projections with the sales, headcount, expense and capital expenditure plans that underpin them.*
- *Communicate plans enterprise-wide: Provide real-time feedback for your planning process, across departments, functions and geographies.*
- *Adjust targets, plans and resource allocations: As conditions change, adapt driver-based plans and rolling forecasts. Don't limit yourself with annual budgets that are out of date as soon as they're completed.*

IBM InfoSphere Master Data Management

Companies across many industries face business challenges that affect their master data — the high-value, business-critical information about customers, suppliers, products and accounts — and the ability of IT to deliver on the requirements of a dynamic business. This critical business information is replicated and fragmented across business units, geographic branches and applications. Enterprises now recognize that these symptoms indicate a lack of effective and complete management of master data. IBM InfoSphere Master Data Management (MDM) addresses these challenges with a proven framework designed to help organizations manage master data across the enterprise.

The fundamental principle of MDM is that master data is decoupled from operational, transactional and analytical systems into a centralized independent repository or hub. This centralized information is then provided to SOA business services so data is managed independently of any single line of business, system or application. This strategy enables enterprises to identify common functionality for all systems and applications and then support efficient, consistent use of business information and processes.

Early attempts at solving the master data problem often involved approaches based on business need, usually addressing one or two specific data domains such as customer or product information. These approaches resulted in the prominent market categories known as customer data integration (CDI) and product information management (PIM). Today, these categories are considered subcategories of MDM.

Master data management helps organizations deliver business value by centralizing multiple domains and providing the functionality to employ multiple master-data usage styles as required by the organization. Effective management of master data—key business information about a company's customers, products and accounts—can help organizations not only drive revenue gains but also help reduce costs, increase strategic flexibility and lower risk.

This master data usage and functionality can be categorized into three different styles: collaborative, operational or analytical. Companies employing the collaborative use of master data will create, define, verify and augment master data to establish a single version of the truth about customers, products, suppliers and other entities. Operational usage is focused on management, delivery and consumption of master data in day-to-day operations. Organizations also can employ an analytical usage style to stage master data destined for analytical systems or to supply rich insight to operational processes.
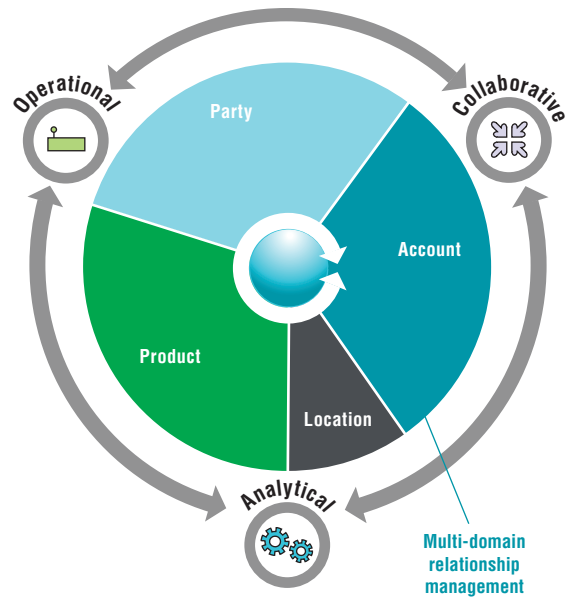

Figure 4. InfoSphere MDM is multiform in nature, covering multiple data domains and multiple deployment modes.

MDM helps maximize the value of information, wherever it resides in the enterprise. MDM can help organizations realize several key business benefits:

- *Increase revenue and customer retention*
- *Reduce costs*
- *Increase flexibility to support new business strategies*
- *Meet compliance requirements and reduce risk exposure*

IBM Information Server
Organizations face an information challenge that begins with locating information, understanding what it means, and getting the information when it's needed in the form needed. Add to that the uncertainties of whether the information can be trusted and then, how to control it. The challenges only mount if businesses cannot ensure that they have access to authoritative, consistent, timely and complete information.
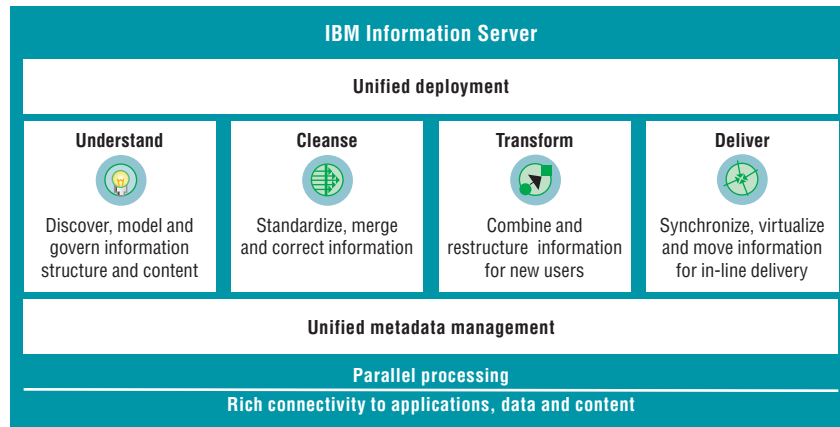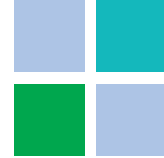
IBM Information Server

Unified deployment

Understand	Cleanse	Transform	Deliver
Discover, model and govern information structure and content	Standardize, merge and correct information	Combine and restructure information for new users	Synchronize, virtualize and move information for in-line delivery

Unified metadata management

Parallel processing

Rich connectivity to applications, data and content

Figure 5. Information Server integrates and cleanses data from all your source systems.

IBM Information Server is a revolutionary new software platform that helps you derive more value from the complex, heterogeneous information spread across your systems. It enables your organization to integrate disparate data and deliver trusted information wherever and whenever it's needed, in line and in context, to specific people, applications and processes. It helps business and IT personnel collaborate to understand the meaning, structure and content of any information across any source. With breakthrough productivity and performance for cleansing, transforming and moving this information consistently and securely throughout your enterprise, IBM Information Server lets you access and use information in new ways to help drive innovation, increase operational efficiency and lower risk.

A foundational element of enterprise information architectures, IBM Information Server is critical to helping businesses meet the demands of strategic business initiatives, arming your enterprise with accurate and consistent business insights that allow you to react competitively in the following areas:

- Business intelligence: *With IBM Information Server, you can harness the power of structured and unstructured corporate data to gain a 360-degree view of customers, suppliers, partners and operations. Develop a unified view of your business, creating a solid, enterprise-wide understanding of existing data sources to support better decisions, cleanse, correct and standardize information, and load analytical views for reuse throughout the enterprise.*

- Infrastructure rationalization: *IBM Information Server allows you to define migration rules for consolidating instances or moving data from obsolete systems to new applications and databases, helping you reduce operating costs by understanding relationships between systems. Within this process, data cleansing and matching helps ensure the highest possible data quality in the new system.*

The IOD Framework for BI provices an end-to-end information infrastructure for BI, including information integration, master data management, data warehousing, industry models and BI tools. It helps customers unlock the business value of their information by leveraging the new IBM acquisition of Cognos and the excellent information integration and information middleware products in the IBM portfolio.

For more information on IOD Framework for BI
To learn more about the IOD Framework for BI or any of the products covered, please contact your IBM sales representative or visit **ibm.com**/bi.

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